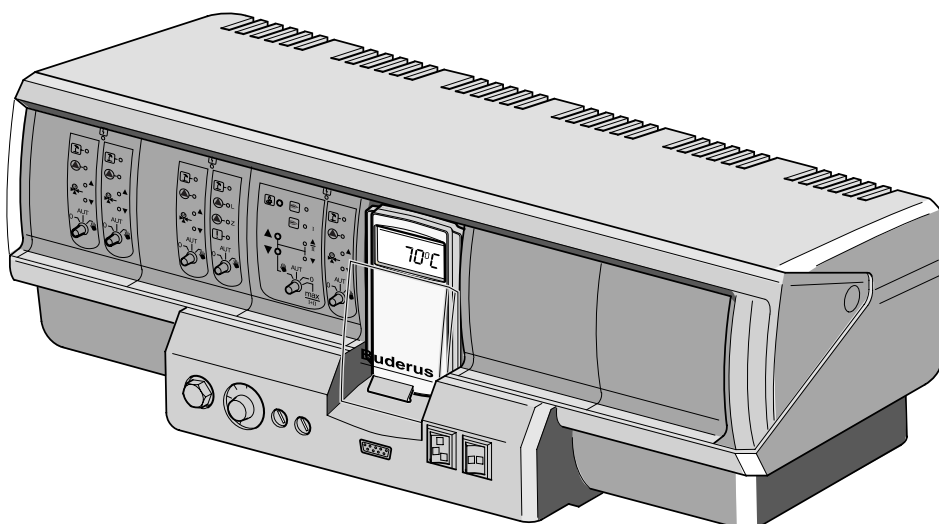
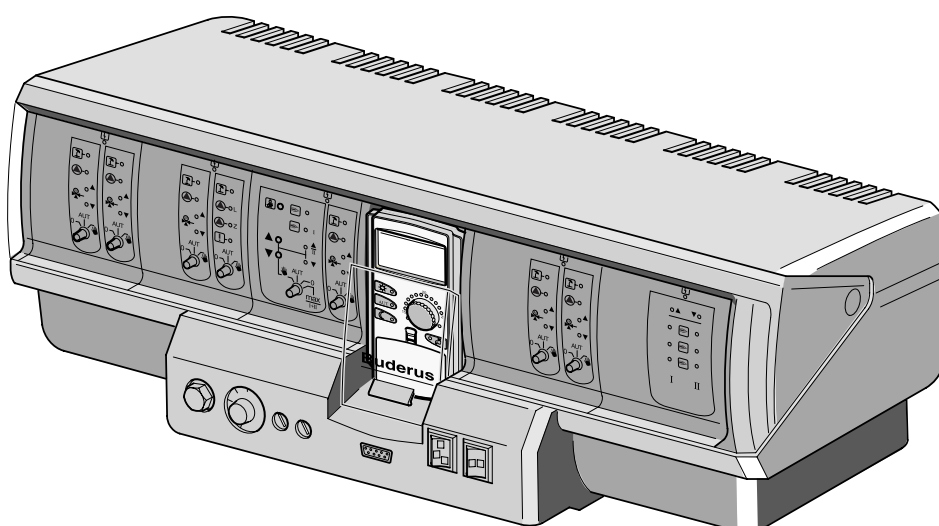


Operating instructions

Logamatic 4311/4312 control unit



s
r
e
p
r
e
s
e
n
t

Please read thoroughly before use.



This unit meets all requirements of relevant European standards directives and guidelines.

Its conformity has been verified. All associated documents and the original Declaration of Conformity are available from Buderus.

About these instructions

These operating instructions contain important information for the safe and correct operation of the Logamatic 4311 and 4312 control units.

Subject to technical modifications.

Constant development may lead to minor deviations in the illustrations, procedures and specifications described/shown.

Updating your documentation

Please let us know if you have any suggestions which would improve our documentation or if you have noticed any errors.

1	Introduction	4
2	For your safety	5
3	Tips on energy-efficient heating	7
4	Controls	8
5	Modules and their functions	9
6	MEC 2 programmer	15
7	Getting started	16
8	Setting the room temperature	19
9	DHW (Domestic Hot Water) control	23
10	DHW circulation pump control	25
11	Calling up displays	27
12	Selecting the standard program	28
13	Changing a program	32
14	Creating a new heating program	42
15	Entering a new DHW program	44
16	Entering a new DHW secondary circulation pump program	45
17	Party/Pause function	46
18	Holiday program	48
19	Setting summer/winter changeover	51
20	Changing the standard display	54
21	Entering date and time	55
22	Flue gas test	57
23	Matching the room temperature sensor	58
24	Operating tips for cascade systems	59
25	Automatic maintenance message	60
26	Troubleshooting	61
27	Emergency mode	63
28	Setup report	65
29	Keyword Index	66

1 Introduction

Logamatic 4311 and Logamatic 4312 control units are designed for modular applications and will, subject to type and extent of the system, be equipped with up to four additional function modules.

The modular design enables, with a full complement of equipment, the connection of up to eight heating circuits with mixing valves.

The modules include controls for manual operation and operating displays.

Logamatic 4311 and Logamatic 4312 has a safety function built in to the unit.

The basic equipment level of Logamatic 4311 comprises:

- Weather-compensated control of one boiler
- Use of single stage, two stage or modulating burner
- Boiler control unit
- MEC 2 programmer

The basic equipment level of Logamatic 4312 comprises:

- Weather-compensated control of one boiler
- Use of single stage, two stage or modulating burner
- Boiler control unit
- Boiler display for indicating the boiler temperature

The MEC 2 programmer is the central control unit.

Functions and operating setting are shown in the display.

The buttons enable functions to be called up. If you push a button and hold it down, you can change the respective setting using the dial.

The new value will be accepted and stored after you release the button.

The unit automatically returns to the standard display, if no entry is detected within approx. 5 min.

The Logamatic 4311 and Logamatic 4312 control units offer the following functions, subject to the function modules which have been fitted:

- 10-channel timer with weekly program
- Automatic time adjustment from a radio clock signal **(This feature does not function in the UK and Eire and should be switched off)**
- Automatic adjustments between summer and winter
- Domestic Hot Water (DHW) production 30 minutes before heating operation
- Domestic hot water priority
- Holiday program
- Frost protection
- 8 standard programs for selection. You can also create your own personal program, if none of the above programs meet your requirements.
- Run-on time for heating circuit pump and DHW cylinder loading pump 3 minutes, subject to operating conditions
- Protection against condensate
- Flue gas test
- Automatic adoption of heating curve
- Self-learning start-up and switch-off optimisation
- Selection between external and room temperature control

2 For your safety

2.1 Correct use

The Logamatic 4311 and 4312 control units are only intended to control heating systems in larger houses, public and commercial properties.

2.2 Please observe these notes

- Only operate the control units as intended and when they are in perfect working order.
- Arrange for your heating engineer to instruct you in the correct operation of the system.
- Read these operating instructions carefully.
- Only enter or change the operating settings specified in these instructions. Other inputs affect the heating system control programs and can lead to system malfunctions.
- Maintenance, repairs and fault diagnosis should only be carried out by authorised and qualified personnel.



RISK TO LIFE

from electric shock.

WARNING!

- Never open the control unit.
- In an emergency isolate the heating system from the mains supply using the emergency stop switch located outside the boiler room or by removing the main fuse.
- Arrange for your installer to rectify immediately any faults in your heating system.



WARNING!

RISK OF SCALDING

For thermal disinfection purposes, the entire DHW system is set in the factory to heat up to 70°C (activated: Tuesday night at 01:00).

- If required (e.g. shift work), your heating installer can alter the activation time.
- If the DHW circuit of your heating system is not equipped with a thermostatic valve, do not open any hot water tap without mixing in some cold water.
- As there is a risk of scalding at temperatures above approximately 60°C, ask your heating installer what temperature the hot water has been set to.



CAUTION!

SYSTEM DAMAGE

through frost.

The heating system can freeze up if it is out of use, e.g. through a shutdown because of fault(s).

- Leave the heating system switched ON all the time.
- Contact your heating installer if a fault occurs.

2.3 Cleaning the control unit

- The control unit should only be cleaned with a damp cloth.

2.4 Disposal

- Dispose of the control unit packaging in an environmentally responsible manner.
- The lithium battery in the CM431 module may only be replaced by your installer.

3 Tips on energy-efficient heating

Buderus control units ensure optimum comfort and many technical options, as well as energy savings and simple operation.

Observing the following tips you could save energy, money and protect the environment.

- Ask your installer to instruct you in the correct use of this equipment during commissioning. If in doubt, ask.
- Read the operating instructions for your heating system thoroughly.
- Have your system adjusted to the conditions of your property.
- Have your heating system regularly serviced.
- During the cold season air rooms, but only for short periods, this prevents rooms getting too cold.
- Check the settings of thermostatic radiator settings in each room.
- Never set the temperature of living accommodation or domestic hot water higher than necessary.

Do the pre-set switching times (day and night setback operation) for central heating and domestic hot water heating, meet your life-style requirements?

- Adjust the standard program to meet your requirements.
- Utilise the setting options to change over between summer and winter.
- Avoid making frequent changes to the temperature settings for accommodation and domestic hot water heating.
- All temperature adjustments take time to take effect. Only change any adjustments you have made the next day, if your previous modifications have failed to provide the desired result.
- A pleasant atmosphere not only depends on the room temperature, but also the relative humidity: the drier a room, the cooler it feels. You can improve the relative humidity with houseplants.

4 Controls

The Logamatic 4312 control unit is generally operated in the same way as the Logamatic 4311 control unit. The following therefore makes no explicit reference to Logamatic 4312.

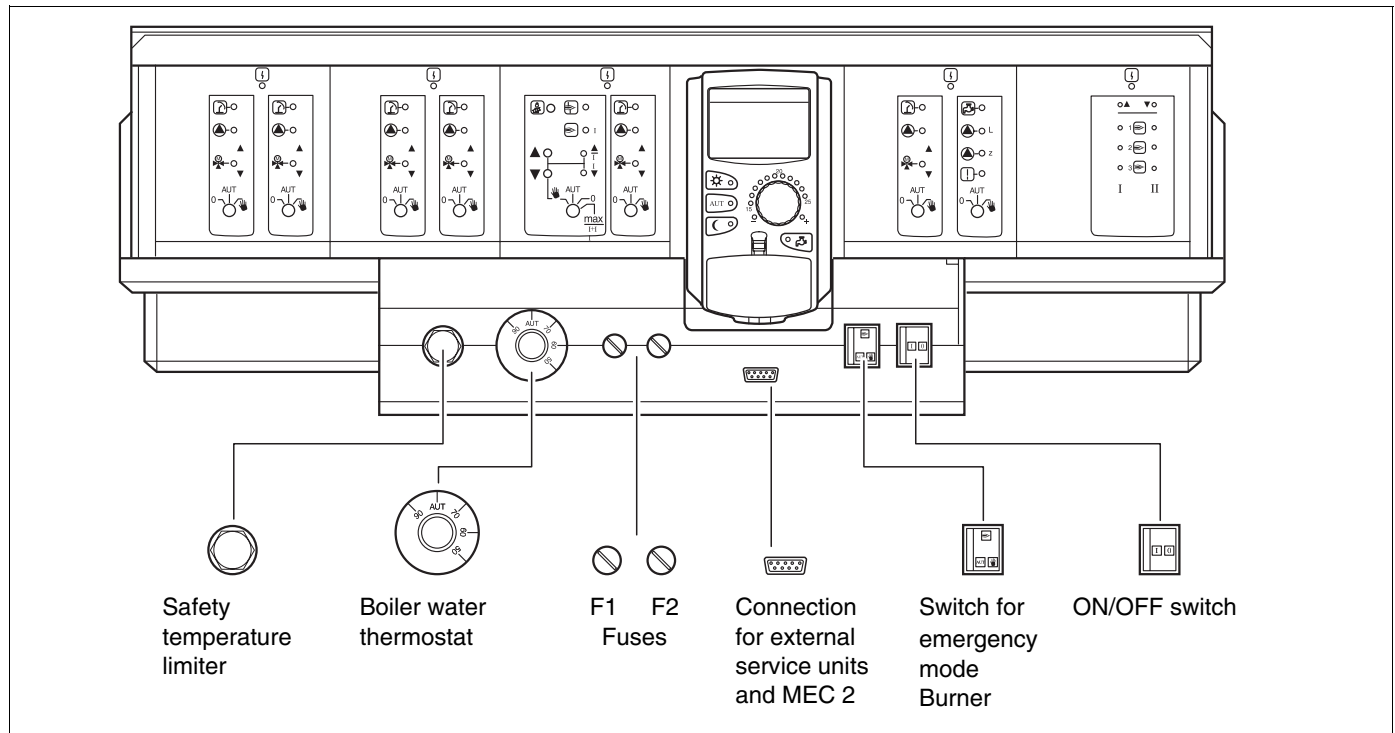


Fig. 1 Controls

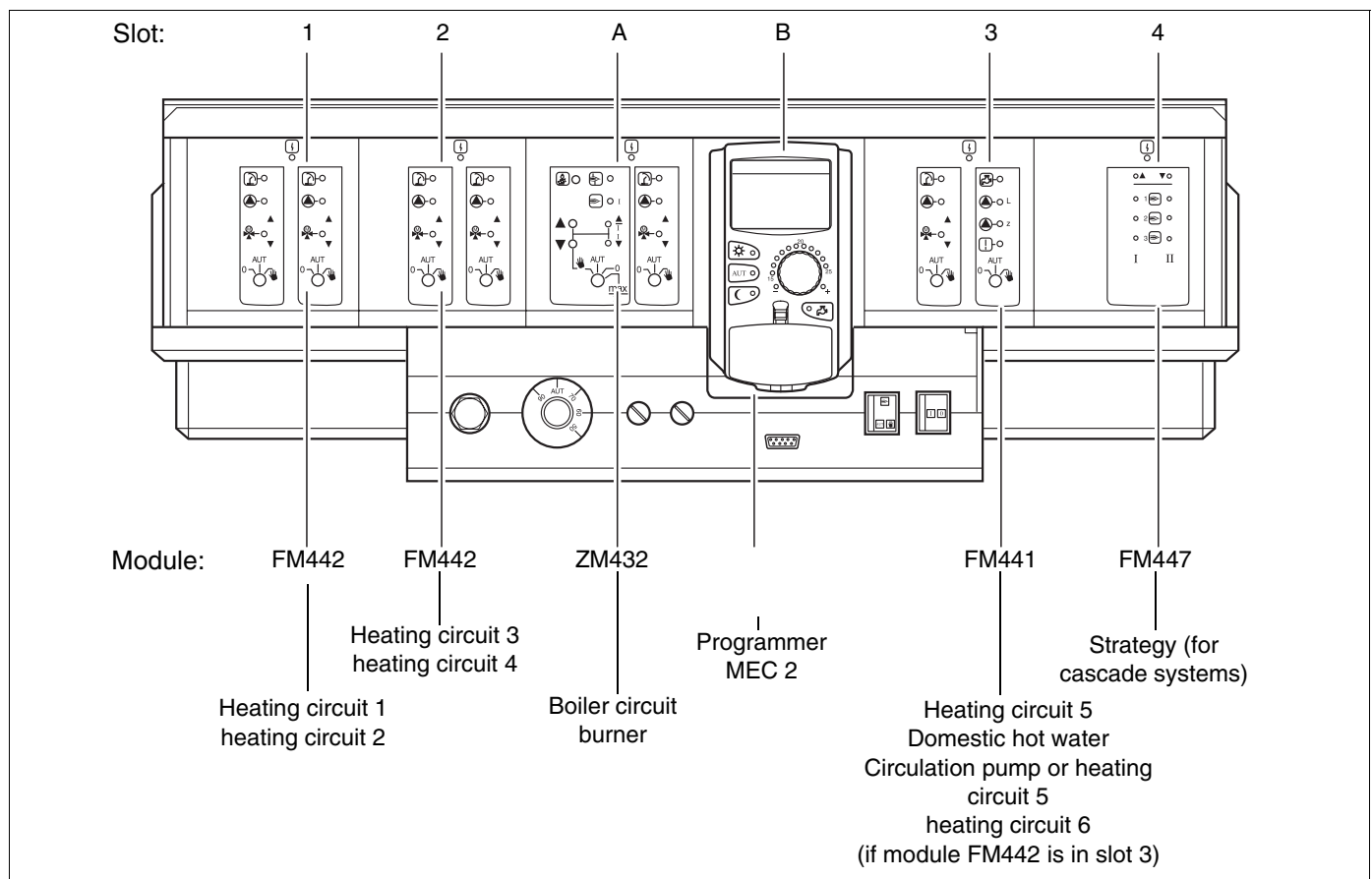


Fig. 2 Module configuration

5 Modules and their functions

All modules which are or can be fitted into your Logamatic 4311/4312 control unit are shown here.

The following pages contain information as to which modules you can use.

		Logamatic	
		4311	4312
Module	MEC 2 programmer	O	X
	programmer module CM431	O	O
	Central module ZM432 Burner + boiler circuit functions	O	O
	Function module FM441 1 heating circuit + 1 DHW circuit	X	X
	Function module FM442 2 heating circuits	X	X
	Function module FM443 Solar heating circuit *	X	X
	Function module FM445 LAP/LSP (loading system) *	X	X
	Function module FM446 Interface EIB *	X	X
	Function module FM447 Strategy	X	–
	Function module FM448 Central fault message	X	X
	Additional module ZM426 Additional STB	X	X

Table 1 Modules and their functions

* These units are not currently available in the UK and Eire, please contact Buderus.

- O = Basic equipment
- X = Optional equipment
- = Combination/installation not possible




USER NOTE

The menus displayed on the MEC 2 programmer depend on which modules are fitted and on their respective settings.

Burner and boiler circuit module ZM432

The ZM 432 module is part of the basic equipment level of Logamatic 4311 and Logamatic 4312 control units. The manual switches on the module are only provided for service and maintenance functions.



If the manual switches are not set to Auto, a corresponding message appears on the MEC 2 programmer and the fault indicator  illuminates.

Never use the manual switches to switch OFF the system when you have to temporarily leave the installation. The control functions continue to operate in manual mode.

Burner function

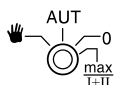
"Flue gas test" button  **for flue gas test**

Press and hold "flue gas test" button for a few seconds.

The central heating control operates for 30 minutes with a higher flow temperature. During the flue gas test, the fault display  and  for summer mode will flash.

Press the emissions test switch again to cancel the flue gas test.

Manual burner switch



The manual switch should always be set to Automatic (AUT). The positions 0, Manual and max I + II are special settings, which should only be operated by specialists when faults exist.

The burner may be directly controlled with the manual switch. However, the control unit continues to operate. Never use the manual switches to switch OFF the system, when you have to temporarily leave the system.

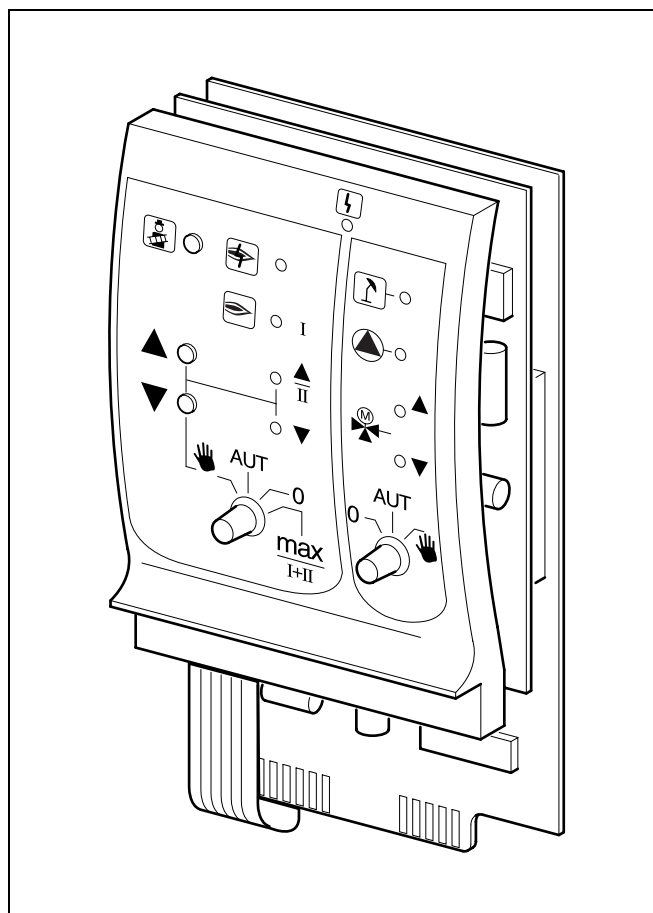






Fig. 3 ZM432


Display  General fault
e.g. site error, sensor error,
external faults,
internal wiring fault,
module error, manual mode.
These fault messages appear
as plain text on the
MEC 2 programmer.

Burner function indicators


Display  Burner fault


Display  Burner operating


Display  Increasing the burner operating output


Display  Reducing the burner operating output



Boiler circuit function indicators

Display  Boiler circuit in summer mode


Display  Boiler pump active

Display  3 way mixing valve opens towards the boiler


Display  3 way mixing valve opens towards the heating circuit

- : Only the first stage will be enabled for single and two stage burners. For modulating burners, the burner output can be infinitely increased using ▲ and infinitely reduced using ▼.
- AUT: The burner operates in automatic mode.
- 0: The burner is switched OFF. Except when the burner emergency mode switch is set to .
- Max I+II: The burner continuously operates at maximum output.

Boiler circuit function

Manual boiler circuit switch 

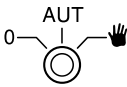

The manual switch should always be set to **AUT**. The positions **0** and **Manual** are special settings, which should only be operated by installers in case of errors.

- : Any installed boiler pump will be switched ON.
The boiler circuit valve can be manually operated.
- AUT: The boiler circuit operates in automatic mode.
- 0: Any installed boiler pump will be switched OFF.
The boiler circuit valve can be manually operated.
Current functions are displayed by LED's.

Heating circuit and DHW module FM441

The FM441 function module controls one heating circuit with valve plus one DHW circuit with circulation pump. One module per control unit may be installed in any slot.

The manual switches on the module are only provided for service and maintenance functions.

If the manual switch  is not set to automatic, a corresponding message appears on the MEC 2 and the fault indicator  illuminates.

Never use the manual switches to switch OFF the system when you have to temporarily leave the installation.

The control functions continue to operate in manual mode.

Heating circuit function

Manual switch for heating circuit



The heating circuit pump is switched ON. The heating circuit valve can be manually operated.

AUT: The heating circuit operates in automatic mode.

0: Only the heating circuit pump is switched OFF. The control functions continue to operate.

DHW function

Manual switch for DHW heating



The DHW loading pump is switched ON.

AUT: The DHW circuit operates in automatic mode.

0: Only the DHW loading pump is switched OFF. The control functions continue to operate.

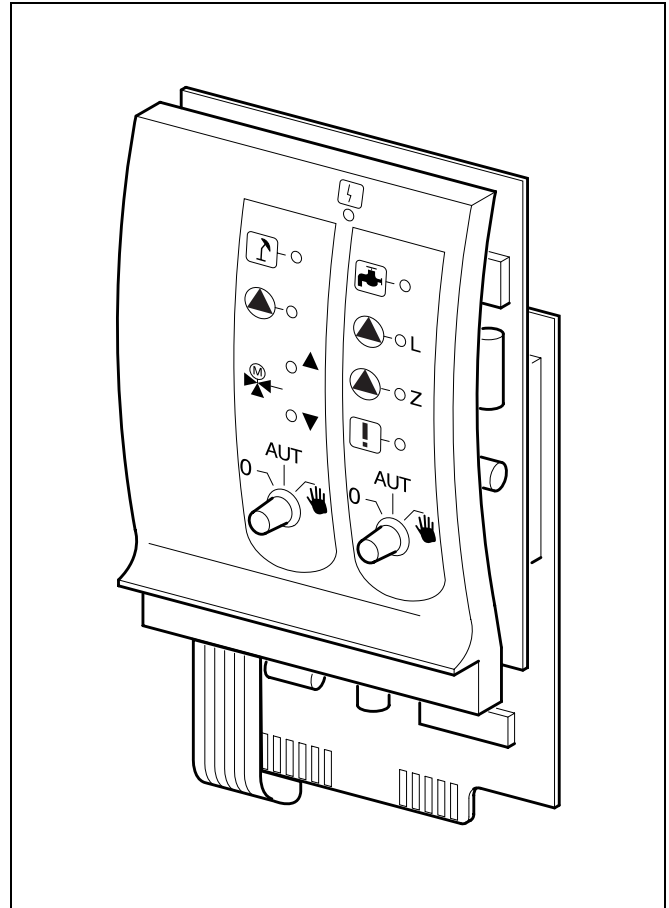


Fig. 4 FM441

Display



General fault
e.g. site error, sensor error,
external faults,
internal wiring fault
module error, manual mode.
These fault messages appear
as plain text on the
MEC 2 programmer.

Heating circuit function indicators

Display



Heating circuit in summer mode

Display



Heating circuit pump active

Display



3 way mixing valve opens

Display



3 way mixing valve closes

Indicators for DHW functions

Display



DHW stays cold

Display



DHW Cylinder loading pump active

Display



Thermal disinfection active. Risk of scalding!

Display



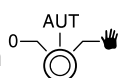

DHW circulation pump active

Heating circuit module FM442

The FM442 function module controls two independent heating circuits with valve.

Each control unit can accommodate up to four such modules.


The manual switches on the module are only provided for service and maintenance functions.

If the manual switch  is not set to automatic, a corresponding message appears on the MEC 2 and the fault indicator  illuminates.

Never use the manual switches to switch OFF the system when you have to temporarily leave the installation. The control functions continue to operate in manual mode.

Heating circuit function 1 + 2

Manual switch – heating circuit 

- : The heating circuit pump is switched ON. The heating circuit valve can be manually operated.
- AUT: The heating circuit operates in automatic mode.
- 0: Only the heating circuit pump is switched OFF. The control functions continue to operate.

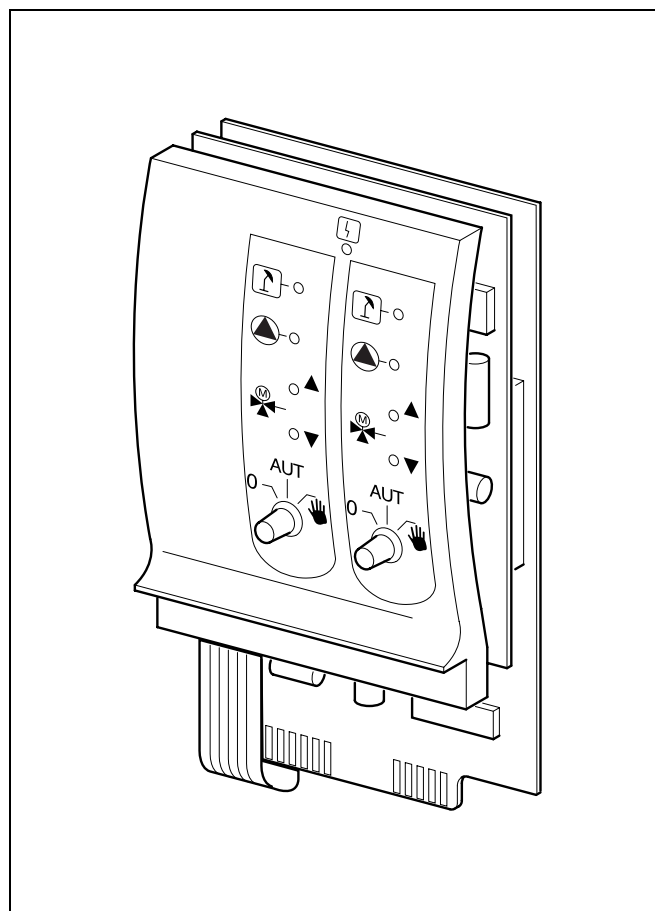







Fig. 5 FM442

Display  General fault
e.g. site error, sensor error,
external faults,
internal wiring fault
module error, manual mode.
These fault messages appear
as plain text on the
MEC 2 programmer.

Heating circuit function indicators

- Display  Heating circuit in summer mode
- Display  Heating circuit pump active
- Display  3 way mixing valve opens
- Display  3 way mixing valve closes

Strategy module FM447

The strategy module is designed to control a cascade system and carries out special functions, e.g. central fault display messages.

The strategy module is not equipped with controls.

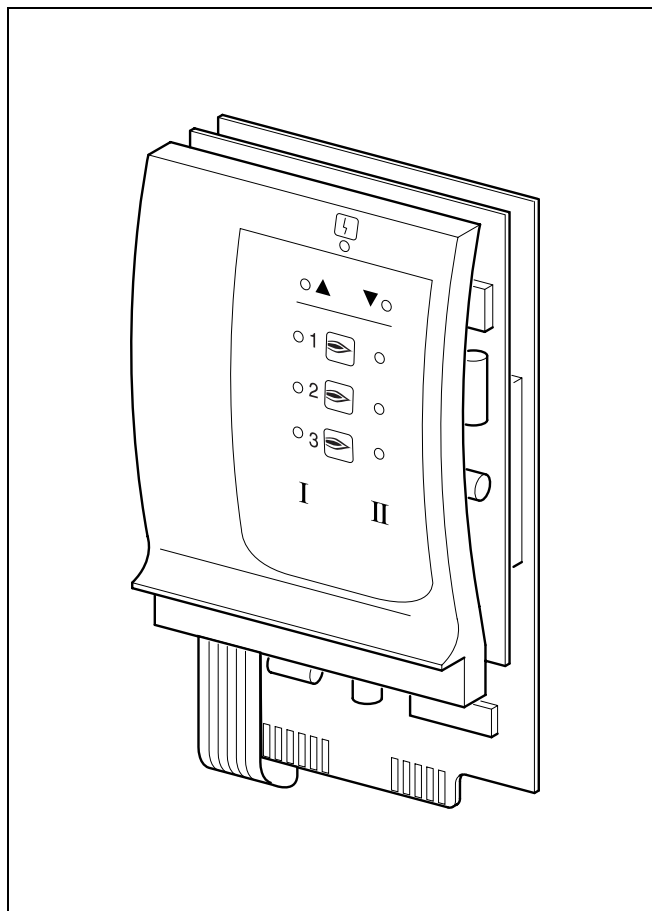








Fig. 6 FM447

Display  General fault
e.g. site error, sensor error,
external faults,
internal wiring fault
module error, manual mode.
These fault messages appear
as plain text on the
MEC 2 programmer.

Indicators for burner functions

Display		Switch on one further burner stage
Display		Switch off one further burner stage
Display	I	1st stage or base load of the respective boiler (burner)
Display	II	2nd stage or modulation load of the respective boiler (burner)
		Boiler display 1 (burner 1)
		Boiler display 2 (burner 2)
		Boiler display 3 (burner 3)

6 MEC 2 programmer

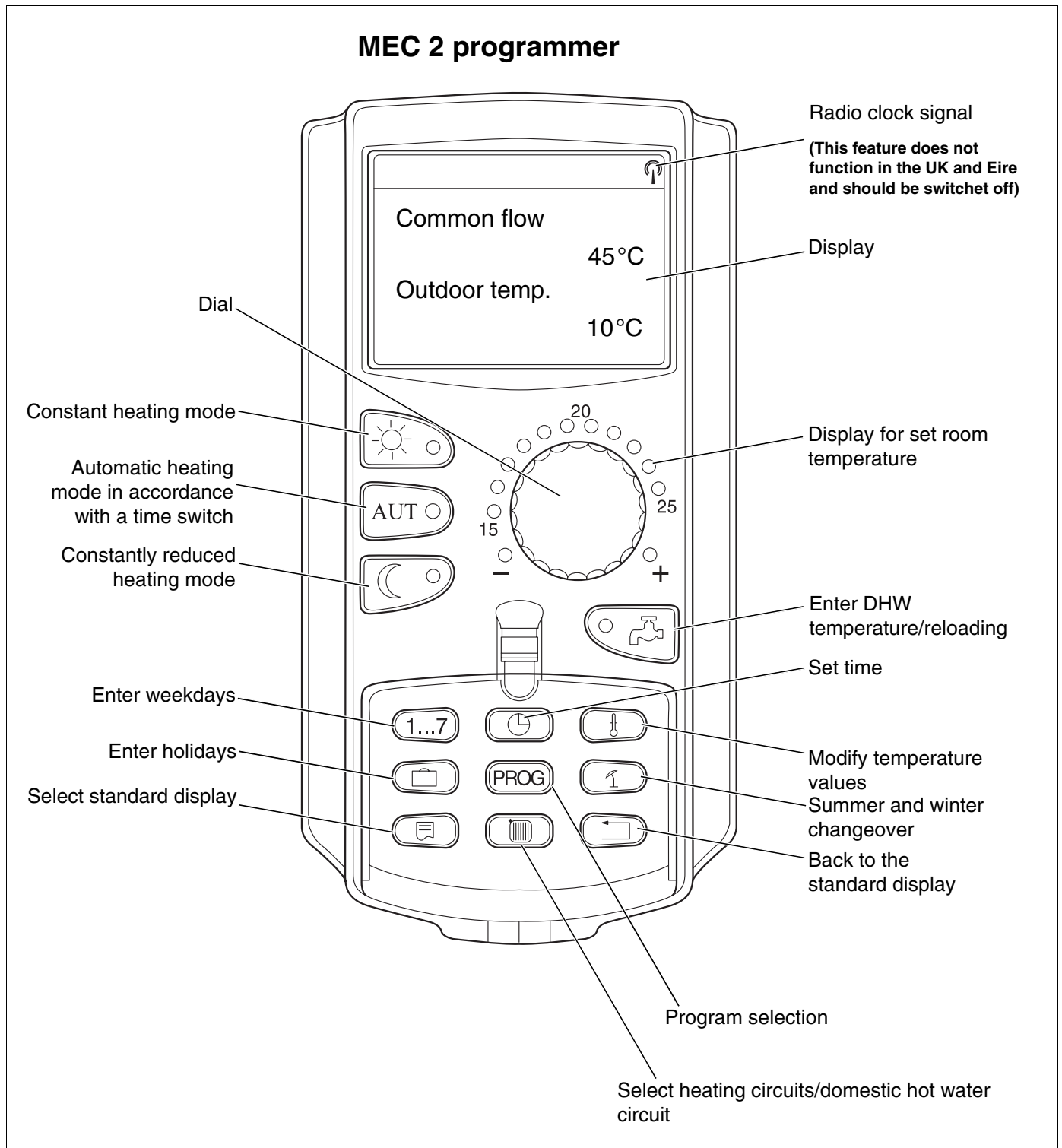



Fig. 7 MEC 2 programmer


7 Getting started

Initial start-up

- Check that all manual switches on the programmer and the modules used are set to **AUT**.
- Set the control unit ON/OFF switch to .

The MEC2 programmer will then start up. Data is then matched between the control unit and the MEC2. A little later, the display of the MEC2 programmer indicates the standard display preset at the factory.

Shutting down

- Set the ON/OFF switch to .
- In an emergency, switch OFF the emergency stop switch outside the boiler area.



Setting the room temperature for all heating circuits allocated to the MEC 2





USER NOTE

- Heating circuits with the MEC 2 programmer are selected as "MEC heat. circ.".
- Heating circuits without MEC 2 programmer are selected as "Heating circuit and heating circuit number" or as "Heating circuit name and heating circuit number".

Setting the day room temperature

- Press and release the  button whilst the cover is closed.
- Turn the dial until the required day room temperature is displayed.
- Press the  button.






Night room temperature

- Press and release the  button whilst the cover is closed.
- Turn the dial until the required night setback room temperature is displayed.
- Press the  button.






Setting the room temperature for heating circuits without an individual remote control unit

Heating circuits are not allocated to the MEC 2.

Setting the day room temperature

- Press and hold down the  button.
- Turn the dial until the required heating circuit is displayed.
- Release the  button.
- Press and hold down the  button.
- Turn the dial until the required day room temperature is displayed.
- Release the  button.
- Press the  button.



Setting the night room temperature

- Press and hold down the  button.
- Turn the dial until the required heating circuit is displayed.
- Release the  button.
- Press and hold down the  button.
- Turn the dial until the required night setback room temperature is displayed.
- Release the  button.
- Press the  button.

Setting the room temperature for heating circuits equipped with different remote control units





See separate operating instructions for the relevant remote control.

Set the DHW temperature

- Press and hold down the  button.
- Turn the dial until the required DHW temperature is displayed.
- Release the  button.




Setting the summer / winter changeover

You must select the required heating circuit before calling up the summer/winter changeover. You may select either an individual heating circuit or all circuits allocated to the MEC 2.

- Press and hold down the  button.
- Turn the dial until the required heating circuit is displayed.
- Release the  button.
- Press and hold down the  button.
- Turn the dial until the outside temperature is displayed, below which heating should commence.
- Release the  button.

Change operating condition

With the cover closed, the operating conditions of those heating circuits are changed, which have been allocated to the MEC 2.

- Press and release the  button with the cover closed.
The system provides constant heat at the set day room temperature.
- Press and release the  button with the cover closed.
The system operates constantly in set back heating mode.
- Press and release the  button with the cover closed.

The system operates automatically according to the set switching program.

8 Setting the room temperature


for all heating circuits allocated to the MEC 2

During the installation, your installer will determine, which heating circuits must be controlled by the MEC 2 programmer. These heating circuits are referred to as "MEC heat. circ.". You set the room temperature for "MEC heat. circ." with the dial.



USER NOTE

Any temperature modification applies to all heating circuits allocated to the MEC 2 programmer at any one time.

If you have selected a single heating circuit and you want to set the room temperature with the  button, the following fault message appears "Setting not possible MEC heat. circ. select".

Factory setting:

Day room temperature:	21 °C
Night room temperature:	17 °C



With the cover closed, turn the dial to the required room temperature, without pressing any other button.

You may select the room temperature in degree steps between 11 °C and 30 °C. The set temperature is displayed via an LED by the dial. For temperatures below 15 °C or above 25 °C, - LED or + LED also illuminates.

Setting
not possible
MEC heat. circ.
select

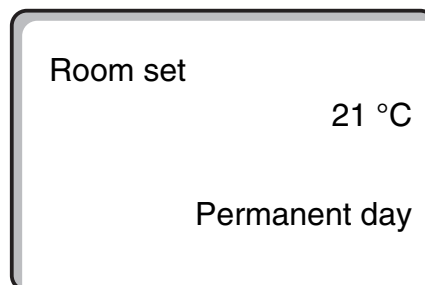
Setting the day room temperature

First change to day mode, if you want to change the day room temperature, whilst your heating system is still operating in night mode.

- Press and hold down the  button.
- Turn the dial until the required day room temperature is displayed.
- Release the  button.

To let the heating system operate in automatic mode:

- Press the  button.



Night room temperature



First change to night mode, if you want to change the night room temperature, whilst your heating system is still operating in day mode.

The night temperature is subject to the "Set-back type" selected at the service level.

For the setback types "Room setback" and "Outdoor setback", the system only heats up to the set night room temperature, if the actual temperature falls below the set night room temperature limit.

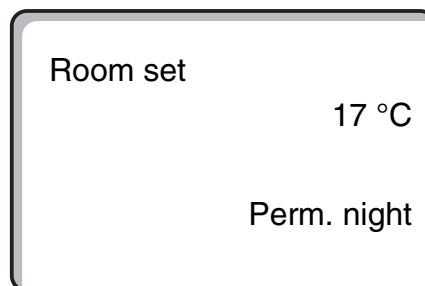
No night room temperature can be selected for the "Cut-off" setback type.

The system heats to the set night room temperature, if the "Reduced" setback type has been selected.

- Press and hold down the  button.
- Turn the dial until the required night room temperature is displayed.
- Release the  button.



To let the heating system operate in automatic mode:

- Press the  button.





Setting the room temperature for heating circuits without remote control

For all heating circuits, to which no remote control was allocated during the installation, the room temperature is set as follows:

- Open the cover.
- Press and hold down the  button.
- Turn the dial until the required heating circuit is displayed.
- Release the  button.

Setting the day room temperature

- Press and hold down the  button.
- Turn the dial until the required day room temperature is displayed.
- Release the  button.



USER NOTE

You cannot select a room temperature for heating circuits set to "Permanent", such as, for example, air conditioning or swimming pool heating systems.

Heat. circ. sel.

Heating circ. 2

Room set

21 °C

Permanent day



Setting the night room temperature

First change to night mode, if you want to change the night room temperature, whilst your heating system is still operating in day mode. The night room temperature is subject to the "Set-back type" selected at the service level. For the setback types "Room setback" and "Outdoor setback", the system only heats up to the set night room temperature, if the actual temperature falls below the set night room temperature limit.

No night room temperature can be selected for the "Cut-off" setback type.


The system heats permanently to the set night room temperature, if the "Reduced" setback type has been selected.

The heating circuit pump remains OFF, until the actual temperature falls below the set night room temperature or the outside setback temperature.

- Press and hold down the  button.
- Turn the dial until the required night setback room temperature is displayed.
- Release the  button.

Setting the room temperature for heating circuits with different remote control units

You must set the room temperature for all heating circuits, to which a remote control without display was allocated during the installation, using this remote control.

If you try to set the room temperature via the  button, the adjacent fault message will be displayed.

Room set.

17 °C

Perm. night

Setting
not possible
Other
remote control



9 DHW (Domestic Hot Water) control

The FM 441 heating circuit and DHW module should be installed to provide DHW control. In the factory, this control unit is set to commence heating the DHW 30 minutes before starting the heating circuits.


The DHW control can be set subject to heating circuit or via an individual time program ("DHW program").


DHW will not be produced, if all heating circuits are operating in setback or holiday mode.

DHW temperature


- Press and hold down the  button.
- Turn the dial until the required DHW temperature is shown.
- Release the  button.
The DHW temperature has been saved.


Re-loading DHW

The DHW temperature has fallen during night set back below the set temperature and can be corrected if required, if the indicator in the  button illuminates.

- Press the  button.
The green LED in the button flashes, until the DHW cylinder has been reloaded.
The DHW circulation pump runs permanently during reloading.

Starting the DHW circulation pump

Pressing the  button only starts the DHW circulation pump, if the DHW is still at its set temperature.

If you started this function in error, press the  button again.

Reloading is then stopped.

DHW
set 60 °C

DHW
measured 55 °C




Reloading

DHW circulat

Pump is on
3 minutes

DHW
measured 55 °C
Reloading
stopped

Setting constant operation

- Open the cover, then press and hold down the  button.
- Turn the dial until "DHW" is shown.
- Release the  button.
- Press the  button.
DHW is now produced at all times. The standard display re-appears after 3 seconds.

Heat circ. sel.




DHW

DHW
set

55 °C

Perm operation




Switching OFF DHW heating

- Open the cover, then press and hold down the  button.
- Turn the dial until "DHW" is shown.
- Release the  button.
- Press the  button.
DHW heating is switched OFF.
The standard display re-appears after 3 seconds.

DHW

OFF

Setting up automatic mode

- Open the cover, then press and hold down the  button.
- Turn the dial until "DHW" is shown.
- Release the  button.
- Press the  button.
DHW heating now operates in automatic mode.
The standard display re-appears after 3 seconds.




DHW

Automatic day

10 DHW circulation pump control

The FM 441 heating circuit and DHW module should be installed to provide DHW circulation pump control. In the factory, this control unit is set to commence the DHW circulation pump operation 30 minutes before starting the heating circuits. The DHW circulation pump control can be set subject to heating circuit or via an individual time program. The DHW circulation pump is switched OFF, if all heating circuits are operating in set back or holiday mode.

Setting constant operation

- Open the cover, then press and hold down the  button.
- Turn the dial until "DHW circulat." is displayed.
- Release the  button.
- Press the  button.
Now the DHW circulation pump operates constantly.
The factory setting is set to twice on for 3 minutes each per hour.
Your local heating installer may change the cycle times at the service level. The standard display re-appears after 3 seconds.




Heat circ. sel.

DHW circulat.

DHW circulat.

Perm. operation




Switching OFF the DHW circulation pump

- Open the cover, then press and hold down the  button.
- Turn the dial until "DHW circulat." is displayed.
- Release the  button.
- Press the  button.
The circulation pump is switched OFF.
The standard display re-appears after 3 seconds.

DHW circulat.

OFF

Setting up automatic mode

- Open the cover, then press and hold down the  button.
- Turn the dial until "DHW circulat." is displayed.
- Release the  button.
- Press the  button.
The DHW circulation pump operates in automatic mode.
The standard display re-appears after 3 seconds.

DHW circulat.

Automatic

In automatic mode the DHW circulation pump runs in cyclic intervals.

The factory setting is set to twice ON for 3 minutes each per hour.

Your local heating installer may change the cycle times at the service level.

Thermal disinfection

As part of thermal disinfection, the DHW is heated once a week to a temperature required to kill off legionnaires' bacteria.

The DHW cylinder loading pump and the DHW circulation pump run constantly during the pasteurisation process.



WARNING!

RISK OF SCALDING

by hot water in the DHW circuit of the heating system if it is not equipped with a thermostatic mixer.

- During and shortly after disinfection, do not open any hot water tap without mixing in some cold water.

11 Calling up displays

Displaying operating settings

This function enables you to gain an overview of system conditions. All operating values relate to the previously selected heating circuit. The boiler and outside temperature appear on the standard display, if the MEC 2 programmer is connected with the control unit.

- With the cover open, turn the dial clockwise without pressing any other button.
- Burner condition 1st stage and hours run

By turning the dial further, the following operational details will appear in sequence:

- Burner condition 2nd stage and hours run (this display only appears for two stage burners)
- Daily consumption currently, yesterday, the day before yesterday
- Current weekly consumption, last week, two weeks ago
- Current annual consumption, last year, the year before last
- Actual and maximum flue gas temperature
- Actual heating circuit room temperature (not possible, if the MEC 2 is fitted to the control unit)
- Set heating circuit room temperature
- Heating circuit operating state
- Actual heating circuit flow temperature
- Actual DHW temperature
- Set DHW temperature
- Operating mode DHW
- Operation state DHW circulation pump and cylinder loading pump

Boiler temp.	56 °C
Outdoor temp.	-10 °C

Burner 1st stage	ON
Hours run	1:00



USER NOTE

The consumption values are purely for comparison, and may not be used for accounting purposes. The operating values of heating circuits will only be displayed if you have already selected the relevant heating circuits. The consumption values will only be displayed if you have already selected this function.

12 Selecting the standard program

A standard program is a switching program with typical switching times set up in the factory. You can select from eight standard programs (see overview of standard programs, page 31). The "Family" program is factory pre-set.

The standard programs can be used separately for each heating circuit. You can modify or supplement the switching points of a standard program to create your own individual program.

If you select "New", all previously entered switching points will be deleted, and you can arrange your own individual program. Your heating system will operate constantly in day mode, if neither a switching point nor a program is entered.

You may create an individual program for every heating circuit. Your individual program will be saved and displayed as "Own" with the "Heat. circ. no".






USER NOTE

This function is not available for heating circuit selection "MEC heat. circ.". An individual heating circuit with "Heat. circ. and heat. circ. no" or "Name heat. circ. and heat. circ. no" should be selected.

Setting
not possible
single heat circ.
select

Selecting a standard program

Example: Heating circuit 2 should operate in accordance with the "Late evening" standard program.

- Open the cover.
- Press and hold down the  button, if "Heating circ. 2" is not displayed.
- Turn the dial until "Heating circ. 2" is displayed.
- Release the  button.
- Press and hold down the  button. "Heating circ. 2" then briefly appears on the display.

Then the mask with "Program choice" and the program, which was last selected, appears.

Example: "Family". The program description flashes.

Heat circ. sel.

Heating circ. 2

Timer

Heating circ. 2

Timer

Program choice


Family

- Turn the dial until the required standard program is displayed. Example: "Late evening"

Timer

Program choice


Late evening

- Release the  button.
The display shows the program description and the first switching point.

Turning the dial enables you to see in sequence and, if necessary, modify the switching points of the program.

For changing switching points, see chapter "Modifying the standard program".

Return to the standard display

- Press the  button.

The heating system now operates with your individual "Late evening" program for heating circuit 2.

When selecting a standard program for other heating circuits, proceed as with the example shown above.

L. Evening prog.

Monday

at 18.30 hrs

21 °C

Summary of standard programs

You may select from seven further standard programs, if the "Family" standard program does not meet your heating requirements.

Program name	Day	Day mode		Day mode		Day mode	
		ON	OFF	ON	OFF	ON	OFF
Family	Mo-Th	5:30	22:00				
	Fr	5:30	23:00				
	Sa	6:30	23:30				
	Su	7:00	22:00				
Early morning Early start	Mo-Th	4:30	22:00				
	Fr	4:30	23:00				
	Sa	6:30	23:30				
	Su	7:00	22:00				
Late evening Late shift	Mo-Fr	6:30	23:00				
	Sa	6:30	23:30				
	Su	7:00	23:00				
Morning Part-time work in the morning	Mo-Th	5:30	8:30	12:00	22:00		
	Fr	5:30	8:30	12:00	23:00		
	Sa	6:30	23:30				
	Su	7:00	22:00				
Afternoon Part-time work in the afternoon	Mo-Th	6:00	11:30	16:00	22:00		
	Fr	6:00	11:30	15:00	23:00		
	Sa	6:30	23:30				
	Su	7:00	22:00				
Noon Midday at home	Mo-Th	6:00	8:00	11:30	13:00	17:00	22:00
	Fr	6:00	8:00	11:30	23:00		
	Sa	6:00	23:00				
	Su	7:00	22:00				
Single	Mo-Th	6:00	8:00	16:00	22:00		
	Fr	6:00	8:00	15:00	23:00		
	Sa	7:00	23:30				
	Su	8:00	22:00				
Senior	Mo - Su	5:30	22:00				
New							

Table 2 Standard programs



After selection, the display indicates the highlighted program description, as shown in the table.

13 Changing a program

Move the switching points or insert new ones, if you intend changing the heating phases of any program.




MEC 2 saves the modified program as "OWN" and the number of the heating circuit, if you make changes to the settings of a standard program.

If you have selected a program for an individual heating circuit, you can do the following:

- display the switching points by turning the dial,
- modify the switching times in 10 minute steps using the  button,
- or select the set room temperature for night or day mode using the  button.

Moving a switching point

Example: You want to move the heating-ON time for Tuesdays in the standard "Family" program for heating circuit 2 from 05.30 to 06.30 h.

- Open the cover.
- Press and hold down the  button.
- Turn the dial until the required heating circuit is displayed.
- Release the  button.
- Press and hold down the  button.
The display briefly shows the heating circuit and then the last set program for this heating circuit. The program description flashes.

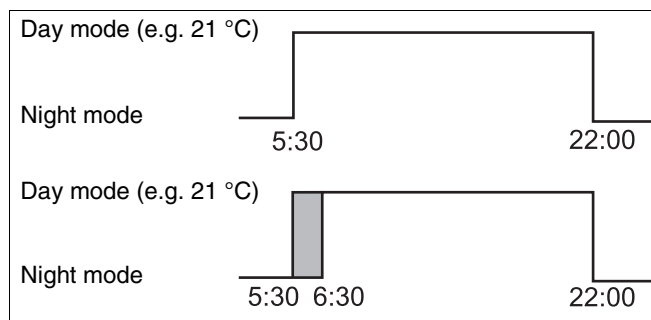


Fig. 8 Changing a program

Heat circ. sel.

Heating circ. 2

Timer

Program choice

Family

- Release the  button.

The display shows the 1st switching point of the selected program.


Family program

Monday
at 05:30 hrs 21 °C

- Turn the dial to the switching point, which you want to move.


Family program

Tuesday
at 05:30 hrs 21 °C

- Press and hold down the  button.
The time of the switching point flashes.

- Turn the dial to Tuesday 06:30.


- Release the  button.

If you want to revert to the previous switching time, press and hold down the  button again, and turn the dial back to the original switching point.

Program "Own" 2

Tuesday
at 06:30 hrs 21 °C

Return to the standard display

- Press the  button.

Inserting switching points

You may interrupt heating phases by inserting switching points.

Example: The standard "Family" program for heating circuit 2 provides constant heating on Fridays from 05.30 until 23.00 h. Insert two new switching points if, for example, you do not want to heat on fridays from 10:00 to 13:00 hrs.

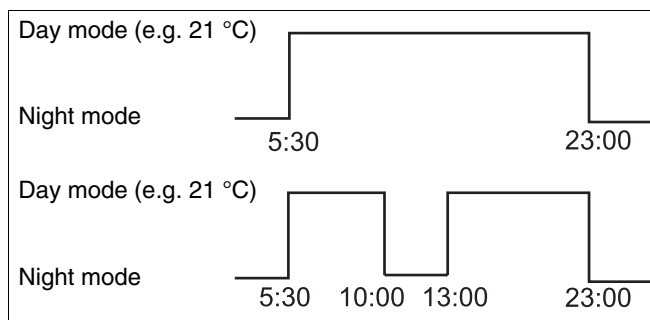




Fig. 9 Entering switching points

Select a heating circuit

- Open the cover.
- Press and hold down the  button.
- Turn the dial until "Heating circ. 2" is displayed.
- Release the  button.

Program selection

- Press and hold down the  button.

The display briefly shows the heating circuit and then the last set program for this heating circuit. The program description flashes.

Heat circ. sel.

Heating circ. 2

Timer

Heating circ. 2

Timer

Program choice

Family

Family program

Monday

at 05:30 hrs

21 °C

- Release the  button.

The display shows the 1st switching point of the selected program.


Entering the first switching point

- Turn the dial anti-clockwise, until the blank mask "New Switch.Point" is displayed.

New Switch.Point

at - -

- -

- Press and hold down the  button.
- Turn the dial to the required day.

You can select days individually or in blocks.

Monday – Thursday

Monday – Friday

Saturday – Sunday




Monday – Sunday

New Switch.Point

Friday

at - -

- -


- Release the  button.
- Press and hold down the  button.
- Turn the dial until the required time is displayed.
- Release the  button.

New Switch.Point

Friday

at 10.00 h

- -

- Press and hold down the  button.
- Turn the dial anti-clockwise, until the set room temperature for setback is displayed, e.g. 17 °C.

You cannot enter any temperature values here. You can only select and save preset day and night temperatures.

- Release the  button.

New Switch.Point

Friday

at 10.00 h


17 °C

The switching point will only be adopted and the blank mask for the next new switching point displayed after you have entered all three details.

Proceed in the same way to enter the 2nd switching point.

The modified program will be saved as "Own 2" and as heating circuit "2".



Return to the standard display

- Press the  button.



Deleting a switching point

Example: You would like to delete the switching point 22:00 in the "Family" program for heating circuit 2.

Select a heating circuit

- Open the hinged cover.
- Press and hold down the  button.
- Turn the dial until "Heating circ. 2" is displayed.
- Release the  button.

Program selection

- Press and hold down the  button.
The display briefly shows the heating circuit and then the last set program for this heating circuit. The program description flashes.
- Turn the dial until your "Family" program is displayed.
- Release the  button.

New Switch.Point

at - - - - -

Heat circ. sel.

Heating circ. 2

Timer

Heating circ. 2

Timer



Program choice

Family

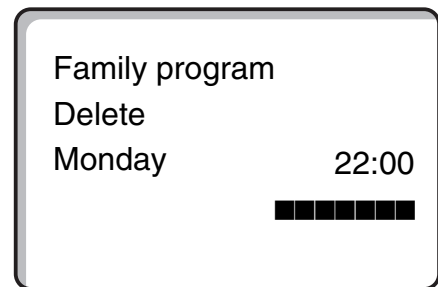
The display shows the 1st switching point of the selected program.



Selecting and cancelling switching points

- Turn the dial to the switching point, which you want to delete.
- Simultaneously press and hold down the  and  buttons.
The bottom line shows 8 blocks, which are deleted in second intervals from left to right. When no blocks are left, the switching point has been deleted.

The deleting process is terminated if you release the button before all blocks are gone.



Deleting a heating phase

Generally, a heating phase comprises two switching points. One switching point can only be moved to the next switching points. A heating phase will be deleted, as soon as its switching points are set to the same time.

Example:

You have selected the standard "Noon" program for your heating system and want to delete the heating phase 11:30 to 13:00 h on Mondays to create a heating break from 08:00 to 17:00 h.

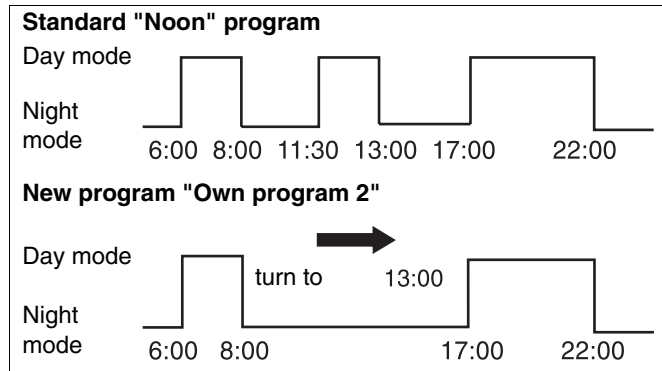






Fig. 10 Deleting a heating phase

Select a heating circuit

- Open the cover.
- Press and hold down the  button.
- Turn the dial until "Heating circ. 2" is displayed.
- Release the  button.

Program selection

- Press and hold down the  button.
The display briefly shows the heating circuit and then the last set program for this heating circuit. The program description flashes.
- Turn the dial until the program selection "Noon" appears.
- Release the  button.
The display shows the 1st switching point of the selected program.

Heat circ. sel.

Heating circ. 2

Timer

Heating circ. 2

Timer

Program choice

Noon

Midday program


Monday

at 06:00

21 °C


Selecting and deleting a heating phase

- Turn the dial until the switching point is displayed, which you want to delete.

- Press and hold down the  button.
- Turn the dial to the next switching point of this heating phase. In this example: 13:00.
At 13:00 h, the display changes to "Switch. periods is deleted". The blocks on the bottom line are deleted from left to right.




USER NOTE

You can interrupt the deleting process before all of the block have disappeared by releasing the  button or by turning the dial back. The switching points will then be retained.

The heating phase with both its switching points 11:30 and 13:00 will be deleted, when all the blocks have disappeared. The new program will then be saved with a continuous heating phase as "Own program 2".

Return to the standard display

- Press the  button.

Midday program

Monday
at 11.30 h 21 °C

Switch. periods

is deleted.



Joining heating phases

Set the "OFF" switching point of the first period to the "ON" switching point of the next switching period to join 2 heating phases.

Example:

Starting from the standard "Noon" program for heating circuit 2, you want to join the Monday heating phase from 11.30 until 13.00 h to the heating phase 17.00 to 22.00 h. In other words you want to heat continually from 11.30 until 22.00 hrs.

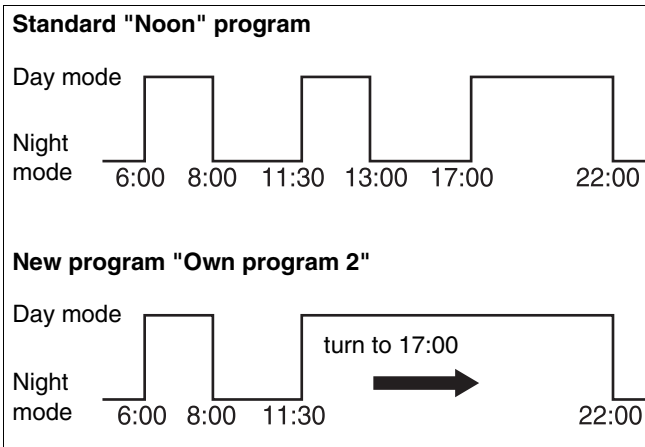




Fig. 11 Connecting heating phases


Select a heating circuit

- Open the cover.
- Press and hold down the  button.
- Turn the dial until "Heating circ. 2" is displayed.
- Release the  button.

Heat circ. sel.

Heating circ. 2

Program selection

- Press and hold down the  button.
The display briefly shows the heating circuit and then the last set program for this heating circuit. The program description flashes.
- Turn the dial until the program selection "Noon" appears.

Timer

Heating circ. 2

Timer

Program choice

Noon

- Release the  button.

The display shows the 1st switching point of the selected program.

Midday program


Monday
at 06:00 hrs 21 °C

Connecting heating phases

- Turn the dial until the switching point of that heating phase is displayed, which you want to join to another. In this example 13:00.

Midday program

Monday
at 13.00 h 21 °C


- Press and hold down the  button.
The time begins to flash.
- Turn the dial to the next switching point. In this example 17:00.
As soon as the switching point 17:00 has been reached, the display changes to "Switch. periods is combined". On the bottom line blocks are display, which disappear one after the other.

Switch. periods

is combined




USER NOTE

You can interrupt the deleting process before all of the blocks have disappeared by releasing the  button or by turning the dial back.

Both switching points "13:00" and "17:00" will be joined, and the new program with the continuous heating phase saved as "Own program 2", as soon as all blocks have disappeared.

Return to the standard display



- Press the  button.

14 Creating a new heating program


Make a note of the switching points and the temperatures of your new heating program.

You can enter up to 42 switching points per week.


Selecting a heating circuit

- Open the cover.
- Press and hold down the  button.
- Turn the dial until "Heating circ. 2" is displayed.
- Release the  button.

Program selection

- Press and hold down the  button.
The display briefly shows the heating circuit and then the last set program for this heating circuit. The program description flashes.

- Turn the dial to program selection "New".

- Release the  button.
The display then shows the mask for the first new switching point.

To enter the new switching point proceed as for "Entering the first switching point", page 35.

Heat circ. sel.

Heating circ. 2

Timer

Program choice

Family

Timer

Program choice

new

New Switch.Point



- - - - -

at - -

- -

Back to the standard "Family" program

Select a heating circuit

- Open the hinged cover.
- Press and hold down the  button.
- Turn the dial until "Heating circ. 2" is displayed.
- Release the  button.

Heat circ. sel.

Heating circ. 2

Program selection

- Press and hold down the  button.

The display briefly shows the heating circuit and then the last set program for this heating circuit. The program description flashes.

Timer

Heating circ. 2

Timer


Program choice

Own 2

Timer


Program choice

Family

- Turn the dial to "Family".
- Release the  button.

Then the standard "Family" program for heating circuit 2 is active again.

Return to the standard display

- Press the  button.



USER NOTE

The program you have created will be saved as "Own program 2" and may be called up at any time.

15 Entering a new DHW program

In the menu item "Program choice" you can determine, whether the DHW heating should be implemented automatically, subject to the heating circuits or whether an individual switching program should be used. The factory setting is "Program choice by heat. circs". With the factory-set program, DHW is heated up automatically 30 minutes before the earliest switching point of any heating circuit.

If your DHW heating should not operate according to the automatic program, you can enter a new, individual DHW program.

Example:

On all weekdays DHW should be heated from 06.30 h until 09.00 h.

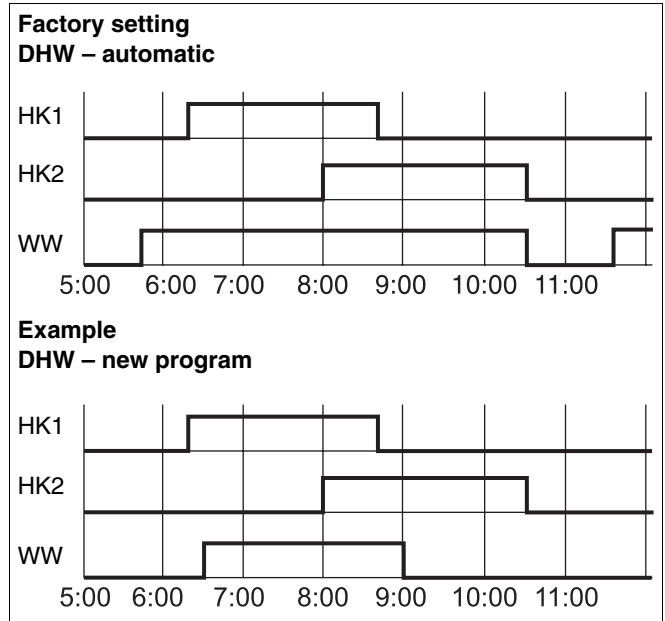






Fig. 12 Entering a new DHW program

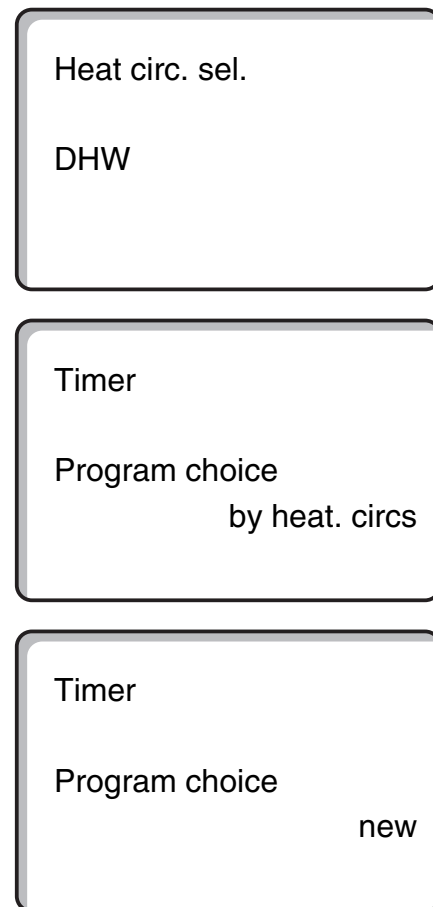
Select a heating circuit

- Open the hinged cover.
- Press and hold down the  button.
- Turn the dial until "DHW" is shown.
- Release the  button.

Calling up a program

- Press and hold down the  button.
- The menu item "Program choice" appears together with the pre-set DHW program "by heat. circs".
- Turn the dial to "new".
- Release the  button.

To enter the new switching point proceed as for "Entering the first switching point", page 35.



16 Entering a new DHW secondary circulation pump program

In the menu item "Program selection" you can determine, whether the DHW circulation pump should be used automatically subject to the heating circuits "Program selection acc. to heating circuits" or whether an individual switching program "Own DHW program selection" should be used. The factory setting is "Program choice by heat. circs". With the factory-set program, the DHW circulation pump automatically starts 30 minutes before the earliest switching of any heating circuit in this control unit, and ends when the last heating circuit is shut down.

If your DHW circulation pump should not operate according to the automatic program, you can enter a new, individual DHW circulation pump program.

Example:

On all weekdays the circulation pump should run from 06.30 h until 09.00 h.

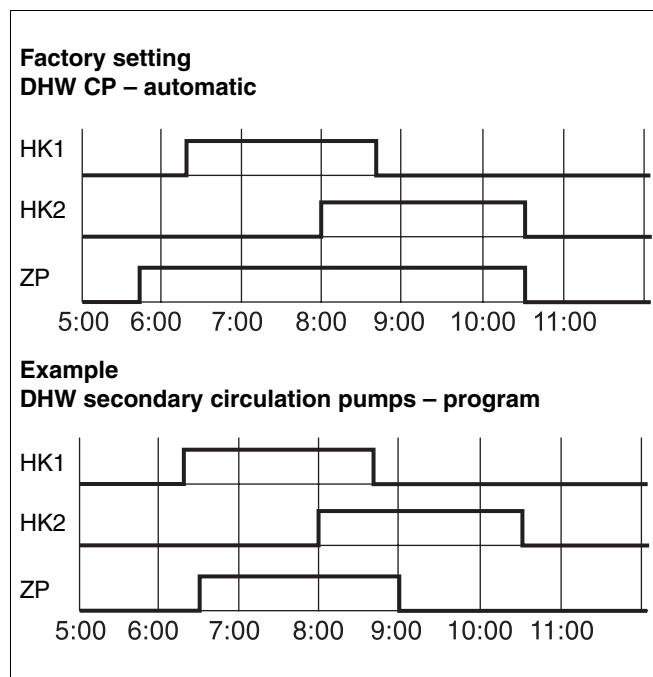






Fig. 13 Entering a new circulation pump program

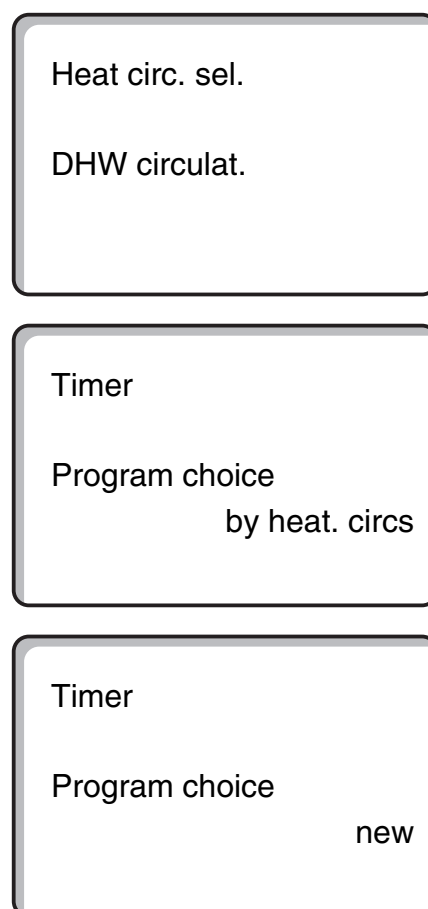
Selecting a heating circuit

- Open the cover.
- Press and hold down the  button.
- Turn the dial until "DHW circulat." is displayed.
- Release the  button.

Calling up a program

- Press and hold down the  button.
- The menu item "Program choice" appears together with the pre-set DHW circulation pump program "by heat. circs".
- Turn the dial to "new".
- Release the  button.

To enter the new switching point proceed as for "Entering the first switching point", page 35.




17 Party/Pause function


Party function

This function only applies to heating circuits, to which the MEC 2 has been allocated as remote control unit ("MEC heat. circ."). All heating circuits without MEC 2 operate normally. Please enter, how long the heating system should only operate with the pre-set day room temperature.

Example:

You have a party and want to heat for the next four hours to the pre-set day room temperature.

- Press and hold down the  button, and simultaneously open the cover of the MEC 2 remote control.

- Turn the dial until the required number of hours is displayed.
- Release the  button.

The party function starts immediately. After four hours, the heating system returns to the automatic heating mode.

- Call up the party function and turn the dial to "0 hours" if you want to cancel the party function.

Party function

0 hours

Party function



4 hours

Pause function

This function only applies to heating circuits, to which the MEC 2 has been allocated as remote control unit ("MEC heat. circ."). All heating circuits without MEC 2 operate normally. Enter how long the heating system should only operate with the pre-set night room temperature.

Example:

You are about to leave your home for three hours and would like to heat less whilst you are away.

- Press and hold down the  button, and simultaneously open the cover of the MEC 2 remote control.
- Turn the dial until the required number of hours is displayed.
- Release the  button.

The pause function starts immediately. After three hours, the heating system returns to the automatic heating mode.

- Call up the pause function and turn the dial to "0 hours", if you want to cancel the pause function.

Pause function

0 hours

Pause function

3 hours

18 Holiday program

Using the holiday program you can heat at a lower room temperature, if you are away for longer periods of time.

Select the required heating circuit before calling up the holiday program. You may select either an individual heating circuit or all circuits allocated to the MEC 2. All heating circuits, for which no holiday program was set up, continue to work normally.



USER NOTE

"MEC heating circuits" see Chapter 8, page 19.




Holiday prog.
not possible
MEC heat. circ.
select

Calling up a holiday program

Example:

If you are on holiday for the next five days and you want to heat less during that time, e.g. heating circuit 2 with a reduced room temperature of 12 °C.

As the holiday program activates immediately after completing your entry, it would be sensible to only enter a holiday program on the day you of your departure.


- Open the hinged cover.
- Press and hold down the  button.
- Turn the dial until the heating circuit, for which you want to set up the holiday program, is displayed.
Example: "Heat. circ. 2"
- Release the  button.
- Press and hold down the  button.

Heat circ. sel.

Heat. circ. 2

Holiday program

Heat. circ. 2



- Turn the dial to the number of days on holiday.
- Release the  button.

Holiday-days

5

Room set.

17 °C

- Press and hold down the  button.
The temperature value flashes.
- Turn the dial until the room temperature required for the holidays is displayed. In the example 12 °C.
- Release the  button.

Holiday days

5

Room set.

12 °C

The holiday program becomes active immediately.



The holiday program terminates automatically with the expiry of the set number of holiday days; the heating system then returns to automatic mode.


The DHW heating and circulation pump will be switched OFF, if DHW is only produced subject to heating circuits (time switch: "Program choice by heat. circs") and all heating circuits are in holiday mode. You cannot enter a separate DHW holiday program.

A separate DHW holiday program can be entered, if you are heating DHW according to your own switching program (time switch: "Program choice own DHW"). The circulation pump is switched OFF automatically during the DHW holiday program.

You can cancel your holiday program at any time by calling it up and setting the number of days away to 0.

Interrupting a holiday program

You may interrupt your holiday program at any time using the  or  button and heat according to the set day and night temperatures.

- Press the  button. Permanent day.
- Press the  button. Permanent night.

Continuing a holiday program

- Press the  button.

Now the heating system operates in holiday mode.

Room set.



21 °C


Permanent day

19 Setting summer/winter changeover

Apart from the outside temperature, Logamatic 4311 and Logamatic 4312 control units consider the ability to store heat and the thermal insulation of the building in question (in the following the "Time del. outdoor temp.") and automatically change over, with time delay, between summer and winter mode.

Summer mode

The heating operation will be switched OFF with a delay, which depends on the heat retaining capability and the thermal insulation of the building. If the "Time del. outdoor temp." exceeds the factory-set changeover threshold of 17 °C. Summer mode is indicated in the display with the symbol . DHW heating remains active. Press the  button, if you wish to heat for a short time in summer mode.

The heating system returns to automatic summer mode if you press the  button.

Winter mode

Central heating and DHW heating are active, if the "Time del. outdoor temp." falls below the factory-set changeover threshold of 17 °C.

Automatic changeover between summer and winter



You must select the required heating circuit before calling up the summer/winter changeover. You may select either an individual heating circuit or all circuits allocated to the MEC 2.




USER NOTE

"MEC heating circuits" see Chapter 8, page 19.


Selecting a heating circuit

- Press and hold down the  button.
- Turn the dial until the required heating circuit is displayed. Example: MEC heat. circ.
- Release the  button.

Setting the changeover temperature

- Press and hold down the  button.
The heating circuit is briefly shown in the display.

Then the mask with the currently set changeover temperature will be displayed. The adjustable temperature flashes.

- Turn the dial to the changeover temperature, below which you want to heat. In the example 18 °C.
- Release the  button.

Setting
not possible
MEC heat. circ.
select

Heat circ. sel.

MEC heat. circ.

Summer/winter





MEC heat. circ.

Summer/winter

Summer from
18 °C

Setting up constant summer mode

Selecting a heating circuit

- Press and hold down the  button.
- Turn the dial until the required heating circuit is displayed.
- Release the  button.
- Press and hold down the  button.
The heating circuit is briefly shown in the display.
Then the mask with the currently set changeover temperature will be displayed. The adjustable temperature setting flashes.
- Turn the dial to a changeover temperature below 10 °C.
- Release the  button.
The heating system will constantly operate in summer mode.

Heat circ. sel.





MEC heat. circ.

Summer/winter

Perm. summer

Setting up constant winter mode

Selecting a heating circuit

- Press and hold down the  button.
- Turn the dial until the required heating circuit is displayed.
- Release the  button.
- Press and hold down the  button.
The heating circuit is briefly shown in the display.
Then the mask with the currently set changeover temperature will be displayed. The adjustable temperature setting flashes.
- Turn the dial to a changeover temperature above 30 °C.
- Release the  button.

Your heating system will constantly operate in winter mode.

Heat circ. sel.

MEC heat. circ.

Summer/winter

Perm. winter

20 Changing the standard display

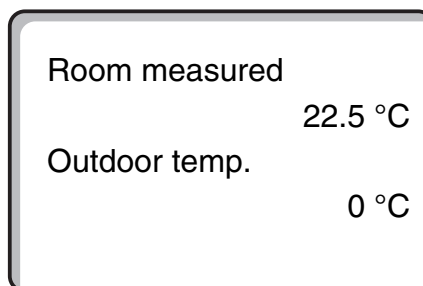
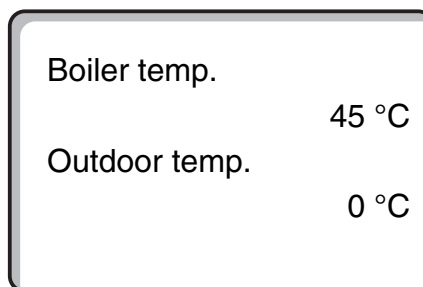
The factory-set standard display shows the boiler temperature, if MEC 2 has been plugged into the control unit.

The actual room temperature will be displayed if a MEC 2 remote control has been mounted in the wall mounting holder.

The outside temperature is displayed on the bottom line.



Instead of outside temperature you can select one of the following displays:

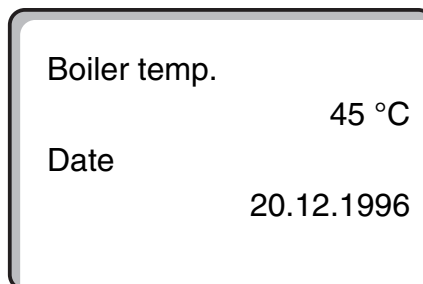
- Boiler temperature (if MEC 2 is fitted to the wall-mounting frame)
- Flue gas temperature
- DHW temperature
- Outdoor temp.
- Time
- Date



Example:

The date should be displayed on the bottom line.

- Press and hold down the  button.
The heading for the display setting flashes.
- Turn the dial until "Date" appears in the display.
- Release the  button.
The changes are saved.



21 Entering date and time


(not currently available in the UK and should be switched off)

The date is set at the factory.

Date and time are synchronised daily via a radio signal [where available]. This also automatically changes between summer and winter. Well screened boiler rooms may impede the reception of the radio clock signal, which makes it necessary for you to set the date and time manually.

The MEC 2 contains a radio receiver (not currently available in the UK and should be switched off), which constantly monitors and corrects the time switch inside the control unit. This means, that you need never set the time during commissioning; after prolonged power failure, after the heating system has been switched OFF for longer periods on its mains electrical isolator or for changing from summer to winter and vice versa. Please note: this facility is subject to the availability of the radio clock signal.





For the MEC 2 remote control, the reception of the radio clock signal is subject to place and location.

Reception of the radio clock signal is indicated by the symbol  on the display.

In case of reception problems, please observe the following:

- The radio reception is weaker in rooms surrounded by steel-reinforced walls, in cellars, high-rise buildings, etc.
- The distance from sources of interference, such as computer monitors and TV sets, should be at least 1-1.50 m.
- Atmospheric interference is not as strong at night than during the day, which is why reception is almost always possible [where generally available].

Setting the date

- Press and hold down the  button. The day flashes in the date display.
- Set the day by turning the dial. The day of the week is automatically matched.
- Release and press and hold down the  button again. Only the month flashes in the date display.
- Set the month with the dial.
- Release and press and hold down the  button again. The year indication flashes.
- Set the year with the dial. Using  you can terminate the date input at any time. The date will be saved with the changes made thus far.

Set date

01.01.1997

Wednesday

Set date

07.01.1997



Tuesday

Set date

07.01.1997

Tuesday

Set the time

- Press and hold down the  button. The hours and minutes flash.
- You change the time in minute steps by turning the dial.
- Release the  button. The time has now been saved.

Set hour

15:52:58

22 Flue gas test



USER NOTE

Observe the relevant national requirements regarding limiting the flue gas losses of your heating system.



WARNING!

RISK OF SCALDING

During the flue gas test, the water can reach a temperature of over 60 °C. This creates a risk of scalding at the taps.

- Only draw off mixed hot and cold water during or just after a flue gas test. Note that when single-lever mixing taps are in their usual position, the water that comes out of the tap will be too hot.
- Never draw off only hot water when using two-handle mixing taps. Always mix with cold water!



Emissions test switch on the ZM 432 module

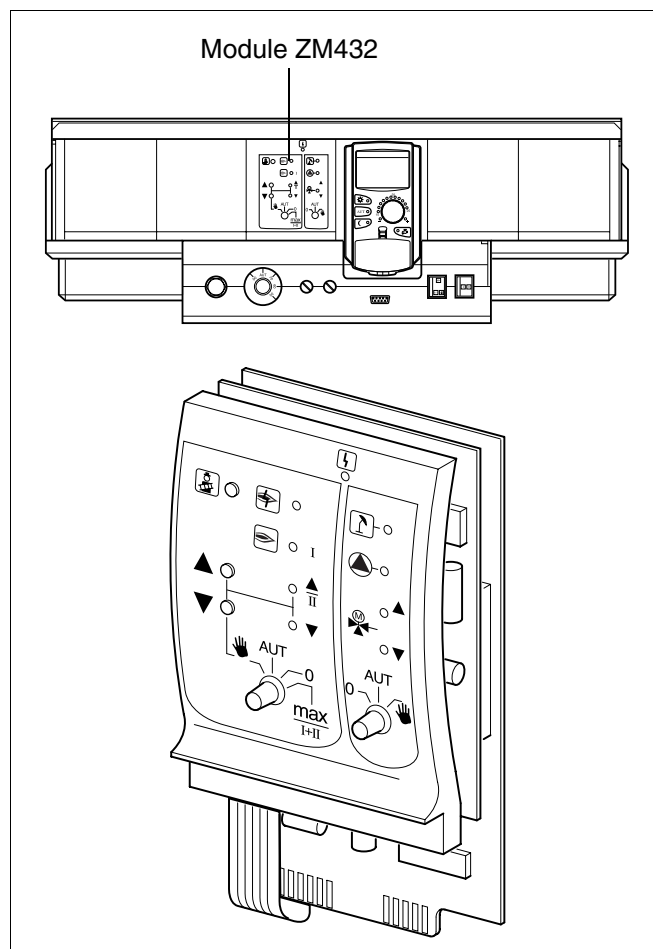




Fig. 14 ZM432

The control unit must be switched ON.

Press the emissions test switch for several seconds to start the flue gas test.

The flue gas test lasts 30 minutes and will be indicated on the display. During the flue gas test, the fault display  and  for summer mode will flash. The control unit automatically reverts to its previous operating mode when the test has been completed.

The flue gas test is cancelled by pressing  again.

Flue g. test act.

Boiler temp.

75 °C

23 Matching the room temperature sensor

If the room temperature shown on the display varies from the actual temperature measured with a thermometer, the display value can be adjusted using "Calibration MEC".

Calibration effects a parallel offset of the heating curve.



The factory setting is 0 °C.

The setting range is +5 °C to -5 °C.

for example Displayed room temperature: 22 °C

Actual room temperature: 24 °C


Matching temperature values

- Open the cover.
- Simultaneously press and then release the  and  buttons.


The display shows "Calibration MEC".

Calibration MEC
Room temperature
Correction

+ 0.0 °C

- Press and hold down the  button.

The setting to be changed flashes.

- Turn the dial until, for example, + 2 °C is displayed.
- Release the  button.

The display now shows the adjusted room temperature, for instance + 24 °C.

Calibration MEC
Room temperature
Correction

+ 2.0 °C

24 Operating tips for cascade systems

For cascade systems or heating system with many heating circuits, the control unit may comprise several control units.


The basic unit is always a Logamatic 4311 control unit, and the additional units are Logamatic 4312 control units. Both control unit types are generally operated in a similar way.

Because the MEC 2 programmer can only process data from one control unit, these must be operated sequentially.


To change to another control unit to enable that unit to be operated, remove the MEC 2 programmer from the former control unit and plug it into the next.

The following messages are then displayed:

Get data

- Press the  button, if you want the heating system data to be adopted from the control unit.

Send data

- Press the  button, if you would like to operate the heating system with modified data from the MEC 2 programmer.

Of course, it is also possible to equip each control unit of a cascade system with its own MEC 2 programmer. In that case, the MEC 2 will not need to be re-plugged and "Get/send data" is superfluous. Each control unit is controlled separately by its own MEC 2, see the operating instructions.

MEC is
initialised

Connection with
ctrl panel with
address 01
established

25 Automatic maintenance message

If your heating engineer has (with your agreement) activated the "Automatic maintenance message", the maintenance message "Note maintenance message" is displayed at the predetermined time (on a particular date or after so many operating hours).

- Open the cover.
- Turn the dial.
You will see either "Maintenance by date" or "Maintenance according to operating hours".
- Notify your heating engineer so they can schedule the inspection and maintenance work.

The Logamatic telecontrol system enables the maintenance message to be transmitted automatically to your mobile, your PC or your fax machine if you wish.



USER NOTE

The automatic maintenance message remains active until your local heating installer resets it.

Note

maint. message

maint. after
Date
required

maint. after
Hours run
required

26 Troubleshooting

Faults and fault displays

Have your heating engineer remedy all faults immediately.

Report the fault initially by telephone to your heating installer. Set the control unit switch and those on the modules in accordance with chapter "Emergency operation". Heating system faults are shown on the display.

The following faults are shown:

- Burner fault boiler 1 – 3
- Boiler temperature sensor
- Outd. Temp. sensor
- Heating circuit flow sensor
Heating circuit 1 – 8 (if installed)
- DHW temperature sensor
- Boiler stays cold
- DHW remains cold
- Remote control no communication with
heating circuit 1 – 8 (if installed)
- Thermal disinfection
- Auxiliary temperature sensor
- Heating circuit 1 – 8 (if installed) pump fault
- DHW pump fault
- DHW inert anode fault
- Safety equipment fault
- No connection to the bus system
- Address used more than once
- System flow sensor
- System return sensor
- Boiler (1 – 3) not connected
- External boiler fault
- Flue gas sensor fault
- Flue gas temperature exceeded
- Address conflict slot 1 – 4 (if installed)
- Incorrect module slot 1 – 4 (if installed)
- Unknown module slot 1 – 4 (if installed)
- Function module not connected
- No master control unit installed
- Solar cylinder X in manual mode
(not available in the UK)
- Heating circuit X in manual mode
- DHW in manual mode
- Boiler circuit in manual mode
- Burner in manual mode

Fault finding

Message	Effect	Remedy
Burner fault	Central heating stays cold	Reset the burner as described in the boiler or burner documentation.
Boiler stays cold	Central heating may stay cold.	Check whether the thermostat is set to AUT . Check whether fuel is available. If unsuccessful: Set the burner emergency operation switch on the control unit to manual. Set the burner manual switch on the ZM 432 module to max/I +II , and set the boiler water temperature using the boiler thermostat. Notify your heating engineer.
The DHW temperature does not rise	DHW may stay too cold, but not necessarily.	Check whether the thermostat is set to AUT . If unsuccessful: Position the DHW and heating circuit manual switch on the FM 441 module to manual. Notify your heating engineer.
Safety chain activated	Central heating stays cold	Check whether the boiler is completely filled with water. Check whether the boiler is under at least 1 bar pressure. If this is the case: Reset the high limit safety cut-out by removing the domed nut and pressing the reset button located underneath the nut. If unsuccessful: Notify your heating engineer.
Remote control fault	The control unit works with the last values set on the remote control.	Notify your heating engineer.
Boiler sensor fault; Outside sensor fault; Flow sensor fault	The heating system may heat with higher temperatures to safeguard the DHW flow.	Consult your heating engineer. Notify your heating engineer which temperature sensor is faulty.
DHW sensor fault	For safety reasons, no hot water will be produced if the DHW sensor is faulty.	Notify your heating engineer.
Heating circuit X in manual mode; DHW in manual mode; Boiler circuit in manual mode; Burner in manual mode	Depending on switch positions, pumps, actuators, etc. will be operated manually. The control functions continue to operate in manual operating mode, but will have no effect on the heating system.	The switch was set to manual (for maintenance purposes or to remedy a fault). Return the manual switches to AUT after the fault has been remedied.


Table 3 Fault table

27 Emergency mode

Control device unit

Never open the control unit. Never attempt to dismantle individual components.

Heating with manual override

For emergency operation, manual switches are provided on the control unit and on the modules. In position  each respective pump will be activated. The mixers stay at zero volts and should be manually adjusted.

Check the settings on individual modules for possible incorrect settings prior to making adjustments for manual operation.

If the control system indicates a fault you may temporarily run your heating system manually.

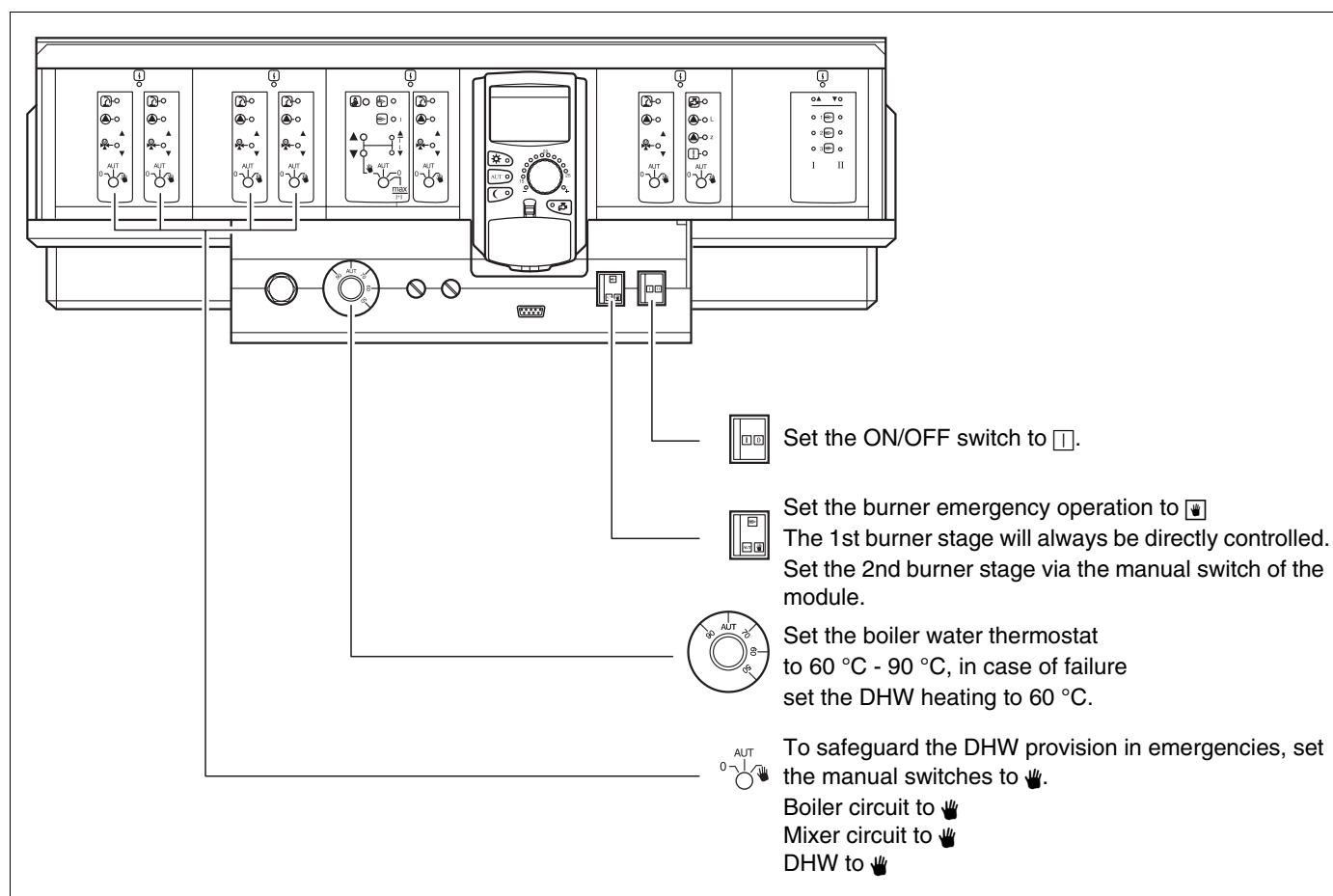


Fig. 15 Heating with manual override







Fault	Settings for an emergency operation				
	ON/OFF switch on Logamatic 4311	Manual switch ZM 432 boiler circuit module	Manual switch FM 441 DHW module	Boiler water thermostat on Logamatic 4311	Manual switch FM 441/2 heating circuit module
Central heating failed Heating circuits failed		AUT	AUT	60-90 °C	
DHW heating failed heating circuits are supplied normally		AUT		60 °C	AUT
Boiler operation failed			AUT	90 °C	AUT

Table 4 Settings for an emergency operation

Manually de-couple the heating circuit mixing valve and position towards "Open" or "Close" (safeguard against return), until the required room temperature has been achieved. Never close the heating circuit mixer to prevent the DHW freezing inside the heating system.

In case of faults, immediately notify your local heating installer who will provide a professional service. It would be helpful for your heating engineer if you could provide him with precise details regarding the fault condition.

28 Setup report

Operating values

Operating values	Input range	Factory setting	Setting
Factory set programs	Family Early morning Late Evening Morning Afternoon Midday Single Senior New	Family	
DHW	30-60 °C	60 °C	
Changeover between summer and winter	10-30 °C	17 °C	
Day room temperature	11-30 °C	21 °C	
Night room temperature	10-29 °C	17 °C	

Table 5 Operating settings

29 Keyword Index

A

- Automatic changeover between summer and winter 52
- Automatic DHW operation 24

B

- Boiler 10
- Burner functions 10
- Burner switch 10

C

- Cascade systems 59
- Changeover between summer and winter 18
- Changing the standard display 54
- Constant DHW circulation pump operation 25
- Constant DHW operation 24
- Controls 8
- Creating a new heating program 42

D

- Day room temperature 16, 17, 20, 21
- DHW circulation pump 25, 45
- DHW control 23
- DHW functions 12
- Displays 27
- Domestic hot water temperature 17, 23

E

- Emergency mode fault 64
- Emissions test switch 57

F

- Fault displays 61
- Fault finding 62
- Flue gas test 10, 57

H

- Heat economically 7
- Heating circuit and DHW module 12
- Heating circuit function 13
- Heating circuit functions 12
- Heating circuit module 13
- Heating with manual override 63
- Holiday program 48

I

- Initial start-up 16
- Inserted modules 8
- Interrupting a holiday program 50

M

- Maintenance message 60
- Matching the room temperature sensor 58
- Modules 9

N

- New DHW program 44
- Night room temperature 17, 22

O

- Operating conditions 18
- Operating settings 27, 65

P

- Party function 46
- Pause function 47
- Program selection 42

R

- Radio clock signal 55
- Reloading DHW 23
- Room temperature 17

S

- Select a heating circuit 42
- Selecting the standard program 28
- Setting the changeover temperature 52
- Setting the date 56
- Setting the room temperature 16, 17
- Setting up summer mode 53
- Setting winter mode 53
- Setup report 65
- Shutting down 16
- Starting the DHW circulation pump 23
- Strategy module 14
- Summary of standard programs 31
- Summer mode 51
- Summer/winter changeover 51
- Switching OFF DHW heating 24
- Switching OFF the DHW circulation pump 25

T

- Thermal disinfection 26

Buderus

Your installer:



Buderus
Cotswold Way, Warndon, Worcester WR4 9SW
Tel.: 01905 752794, Fax: 01905 753130
www.buderus-commercial.co.uk

BBT Thermotechnik GmbH
D-35573 Wetzlar
www.heiztechnik.buderus.de
info@heiztechnik.buderus.de

In the UK, Buderus is a trading name of
BBT Thermotechnology Ltd.